

Remarks

Claims 117-127 are pending. Claims 117-127 are rejected. Claims 118-127 are objected to as being dependent from a rejected base claim. Claim 117 is amended herein.

Applicants note that the preliminary amendment filed on October 13, 2003, has not been acknowledged. Applicants request acknowledgement of entry of the preliminary amendment, wherein the priority claim was amended.

The abstract of the disclosure was objected to because the abstract did not reflect the subject matter of the claims. Applicants amend the abstract herein to bring it into compliance.

Claims 117-127 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Specifically, claim 117 was rejected for stating that the yield amount is based upon two groundspeed signals. Claims 118-127 were rejected as depending from a rejected base claim. Applicants herein amend claim 117, and request that the rejection be removed. The amendment is supported in the specification at paragraphs [0131], [0132], and [0138].

Claim 117 stands rejected under 35 U.S.C. §102(e) over U.S. Patent 6,525,276 (Vellidus et al.). Inasmuch as the rejection applies to the claims as amended, Applicants respectfully traverse the rejection.

Claim 117 requires a volume increment accumulation measuring device generating a volume increment accumulation signal substantially related to a forage mass. Claim 117 further requires a computer that receives said volume increment accumulation signal and generates yield amount based upon said accumulation signal, a forage processing machinery groundspeed, and forage processing machinery intake parameters. Advantageously, by measuring forage volume increments as they are accumulated, the forage processing machinery can reliably determine a forage yield amount.

Vellidus does not disclose a volume increment accumulation device. Vellidus does not disclose generating a volume increment accumulation signal that is substantially

related to a forage mass. Vellidus does not disclose a computer that receives a volume increment accumulation signal. Vellidus does not disclose a computer that generates a yield amount based upon the accumulation signal, a forage processing machinery groundspeed, and forage processing machinery intake parameters.

In contrast, Vellidus discloses a yield monitor for a peanut combine. Vellidus measures a crop yield by measuring a mass or weight of harvested peanuts collected in a collection basket (see col. 3, lines 44-54). Vellidus employs four (4) load cells supporting the collection basket in order to measure the mass (see also col. 9, lines 5-11). Vellidus uses the measured speed of the combine in order to calculate the yield (see col. 10, lines 5-8).

The Office Action asserts that Vellidus discloses a volume increment accumulation signal, and cites col. 9, line 3 to col. 10, line 14 of Vellidus in support of this assertion. This is incorrect. The cited text discusses using a mass or weight measurement to calculate yield amount (see col. 9, lines 6-11). The cited text does not teach or suggest a volume increment accumulation signal. Volume cannot be measured by a weight (*i.e.*, force) measuring device, such as a load cell.

Independent claim 117 therefore includes features that are neither taught nor suggested by Vellidus. Applicants respectfully request that the rejection of claim 117 be removed and the claim be allowed.

Claim 117 stands rejected under 35 U.S.C. §102(e) over U.S. Patent 6,272,819 (Wendte et al.). Inasmuch as the rejection applies to the claims as amended, Applicants respectfully traverse the rejection.

Wendte does not disclose a volume increment accumulation device. Wendte does not disclose generating a volume increment accumulation signal that is substantially related to a forage mass. Wendte does not disclose a computer that receives a volume increment accumulation signal. Wendte does not disclose a computer that generates a yield amount based upon the accumulation signal, a forage processing machinery groundspeed, and forage processing machinery intake parameters.

In contrast, Wendte discloses a yield monitor for a sugar cane harvesting vehicle. Wendte includes a cutter, a chopper for chopping the cut cane, and an elevator for

elevating the resulting sugar cane billets to a storage device (see col. 2, lines 45-59). A hydraulic pressure required to power a hydraulic elevator motor and elevate the sugar cane to the storage device is used in order to determine a sugar cane yield. The weight of the sugar cane on the elevator is sensed and is used to determine the yield amount (see col. 5, lines 28-34, col. 7, lines 1-12, and col. 8, lines 15-19). Alternatively, Wendte discloses using a deflection plate for measuring yield amount (see col. 10, lines 29-38).

The Office Action asserts that Wendte discloses a volume increment accumulation device (200), and cites col. 11, lines 11-14 in support of this assertion. This is not an unreasonable assumption, based on the term "quantity" in the cited text. However, Applicants respectfully disagree, as a close reading of Wendte reveals that Wendte does not measure volume. FIG. 5 of Wendte shows a "sensing assembly (200)", wherein the sensing assembly 200 comprises deflection plate 202, a plate shaft 204, a plate lever 206, a plate load cell 208, and a plate pre-load assembly 210. Wendte discloses that, using the sensing assembly (200), "Billets falling down into the external storage device impinge upon deflection plate 202 to exert a force on plate 202" (see col. 10, lines 41-43). The sensing assembly (200) therefore comprises a force measuring device, and not a volume increment accumulation device. Volume cannot be measured by a force measuring device, such as a load cell.

Independent claim 117 therefore includes features that are neither taught nor suggested by Wendte. Applicants respectfully request that the rejection of claim 117 be removed and the claim be allowed.

Claims 117 and 119 stand rejected under 35 U.S.C § 103(a) over U.S. Patent No. 5,913,901 (Bottinger et al.) in view of Vellidus. Inasmuch as the rejection applies to the claims as amended, Applicants respectfully traverse the rejection.

Bottinger discloses a square baler that measures weight of the received mass (see col. 1, lines 8-10). Bottinger discloses measuring bale weight in conjunction with a baler position (see col. 1, lines 55-58). Bottinger measures a drive load of the cutting rotor on the drive shaft, a pressure feeler or sensor 38 that measures a transporting pressure of the product mass to be cut on the cutter 32, a rotary sensor that determines rotary speed differences which occur due to the alternating loading of the working element, expansion

measurement strips 40 that are arranged on the connecting rod of the pressing piston 12 (function unknown), and a pressure sensor 42 that monitors a working pressure of the hydraulic cylinder-piston unit (see col. 3, lines 22-36). In addition, Bottinger includes a pressure sensor 42 that measures a support load on the hitch, a pressure sensor 44 that supports the weight of the bale located at the outlet of the pressing passage, and weight sensors which measure the weight of the baler on the axle (see col. 3, lines 50-61).

As discussed above, Vellidus discloses a yield monitor for a peanut combine that measures a crop yield by measuring a mass of harvested peanuts collected in a collection basket.

Neither Bottinger nor Vellidus disclose a volume increment accumulation device. Neither Bottinger nor Vellidus disclose generating a volume increment accumulation signal that is substantially related to a forage mass. Neither Bottinger nor Vellidus disclose a computer that receives a volume increment accumulation signal. Neither Bottinger nor Vellidus disclose a computer that generates a yield amount based upon the accumulation signal, a forage processing machinery groundspeed, and forage processing machinery intake parameters.

Independent claim 117 therefore includes features that are neither taught nor suggested by the combination of Bottinger and Vellidus. Claim 119 is allowable for the same reasons as claim 117.

Claims 120 and 121 stand rejected under 35 U.S.C. § 103(a) as being obvious over Bottinger and Vellidus and further in view of U.S. Patent 5,855,166 (McPherson). Claims 120 and 121 depend from independent claim 117, and therefore are patentable for the reasons previously discussed.

Claim 127 stands rejected under 35 U.S.C. § 103(a) as being obvious over Vellidus in view of U.S. Patent 4,487,002 (Kruse et al.). Claim 127 depends from independent claim 117, and therefore is patentable for the reasons previously discussed.

Applicants submit that there are numerous additional reasons in support of patentability, but that such reasons are moot in light of the above remarks and are omitted in the interests of brevity. Applicants respectfully request allowance of claims 117-127.

Date 5/28/04

  
SIGNATURE OF PRACTITIONER

Gregg Jansen, Reg. No. 46,799  
Duft Setter Ollila & Bornsen LLC  
Telephone: (303) 938-9999 ext. 14  
Facsimile: (303) 938-9995

**CUSTOMER NO. 36122**